



System and Method For Detecting Emitter  
Signals Having Multi-valued Illumination  
Times  
GOUNALIS, Anthony J.  
Serial No.: 10/675,541  
Docket No.: L0562.70036US00

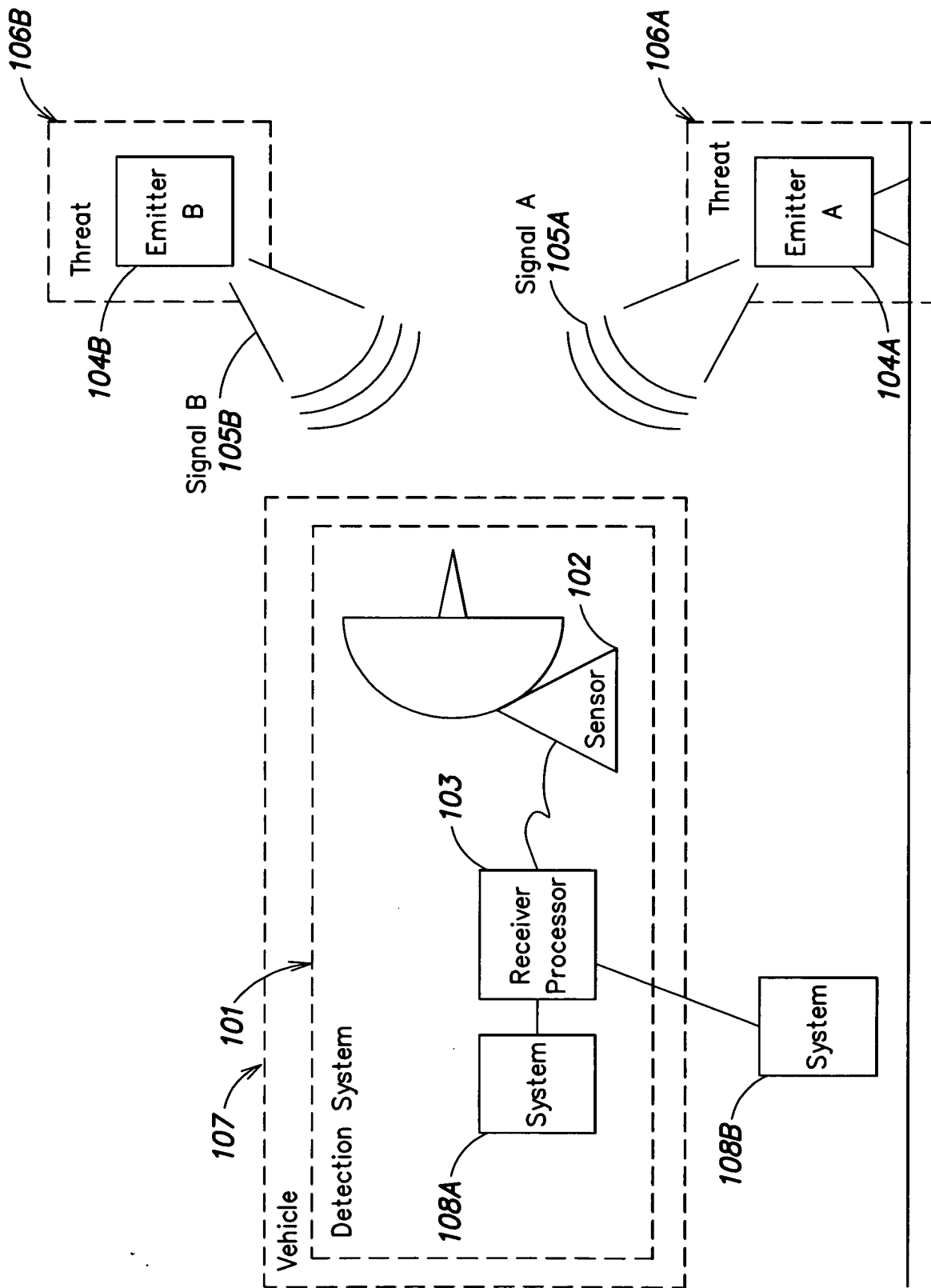


FIG. 1

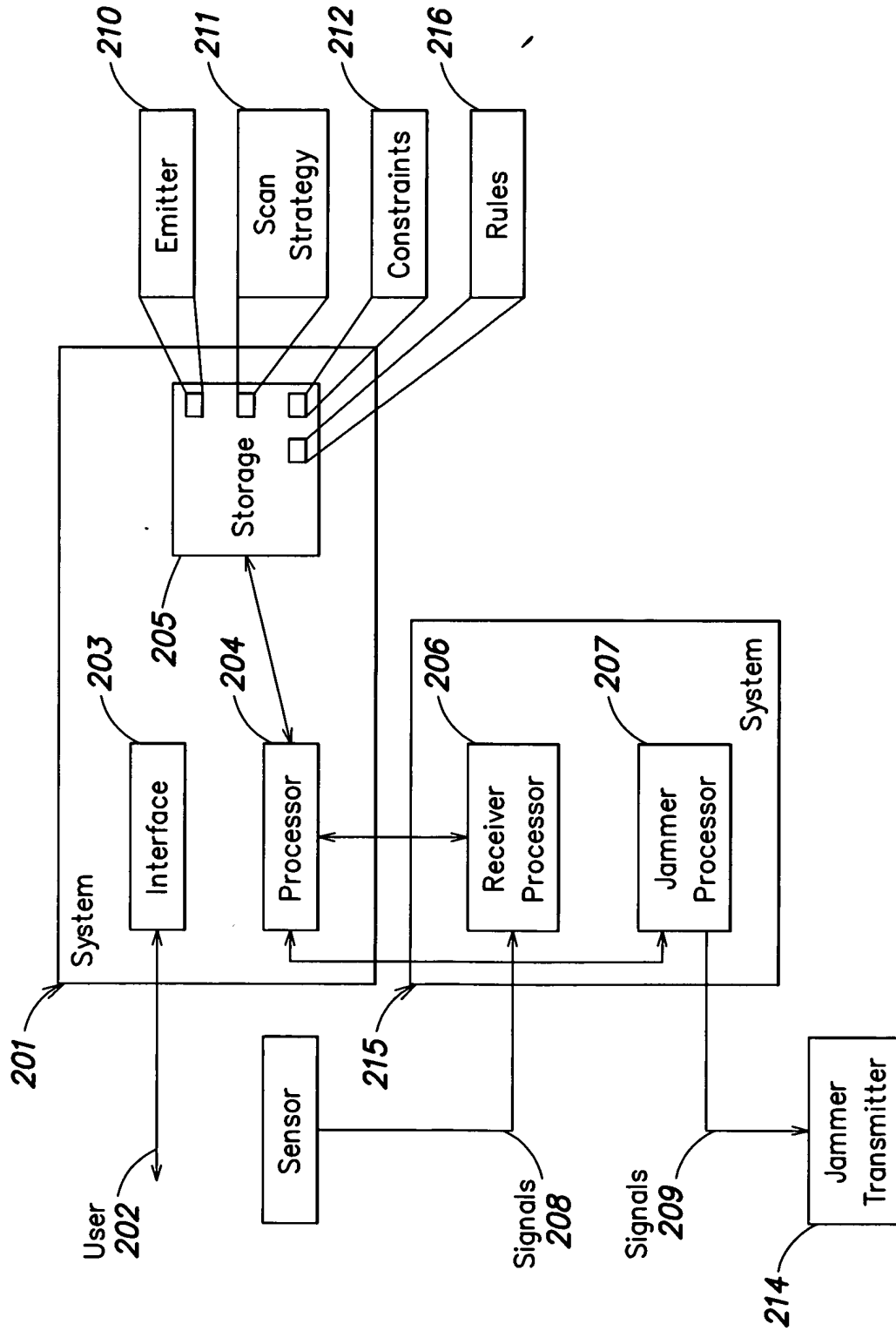
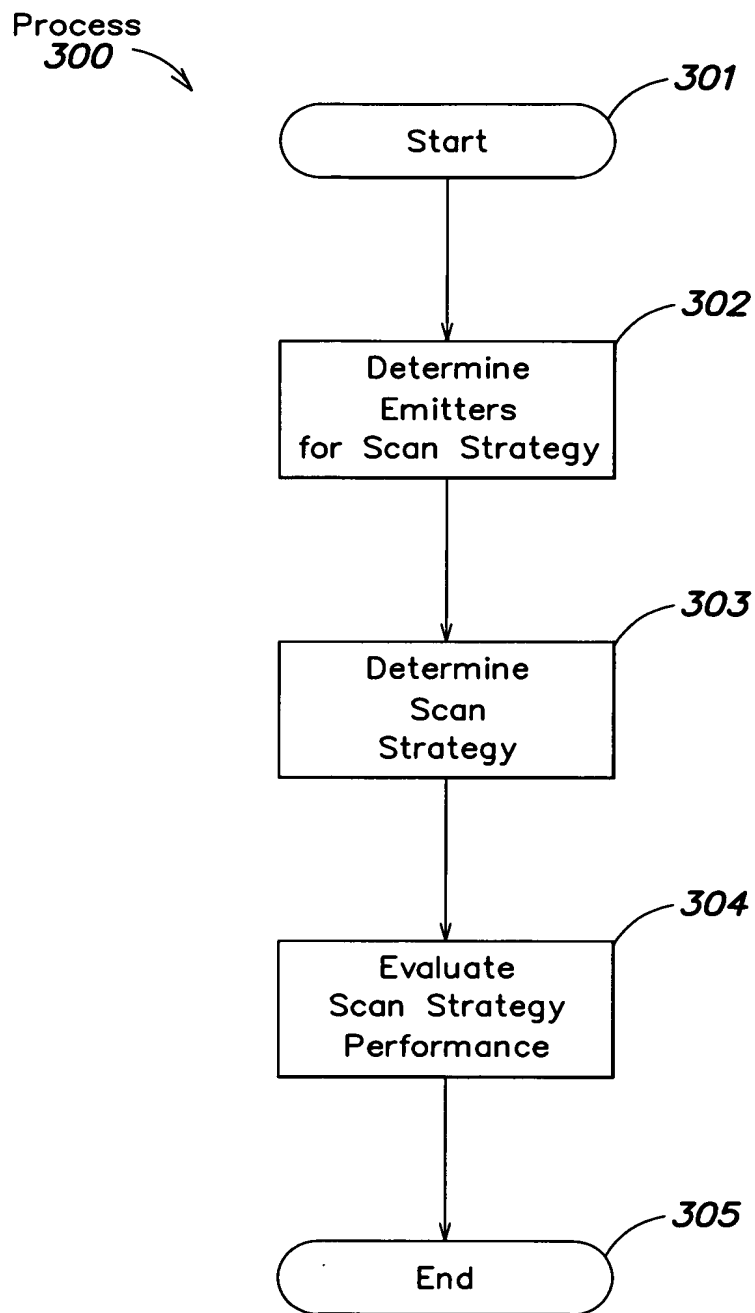
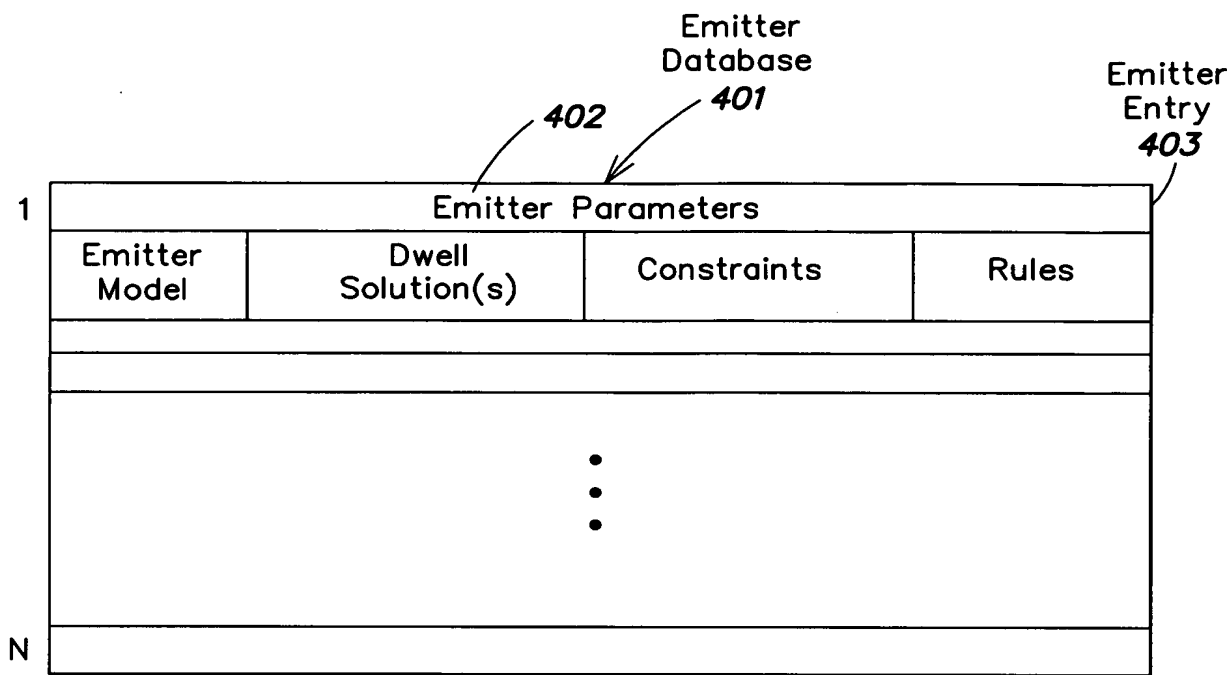


FIG. 2



**FIG. 3**



**FIG. 4**

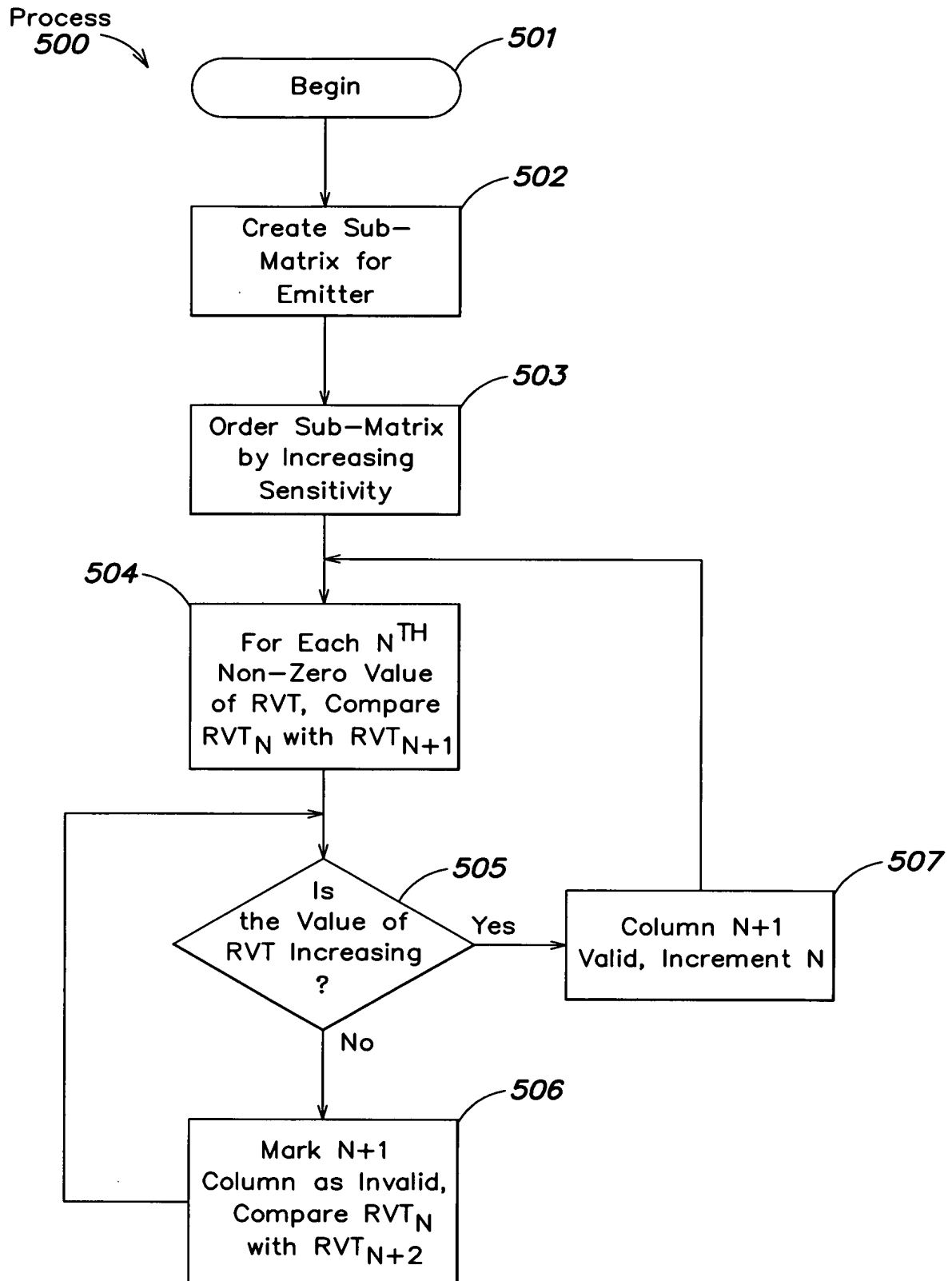
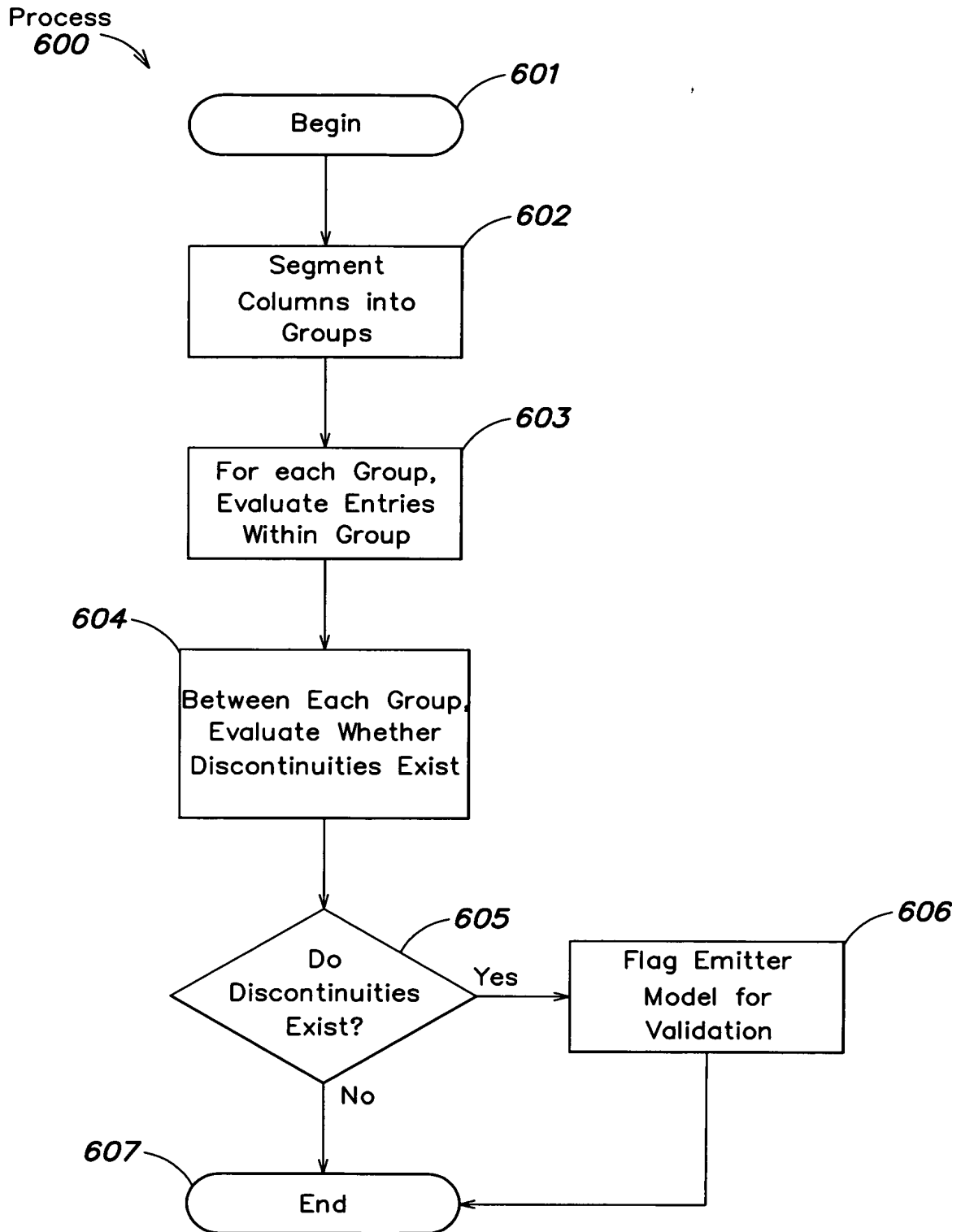


FIG. 5



**FIG. 6**

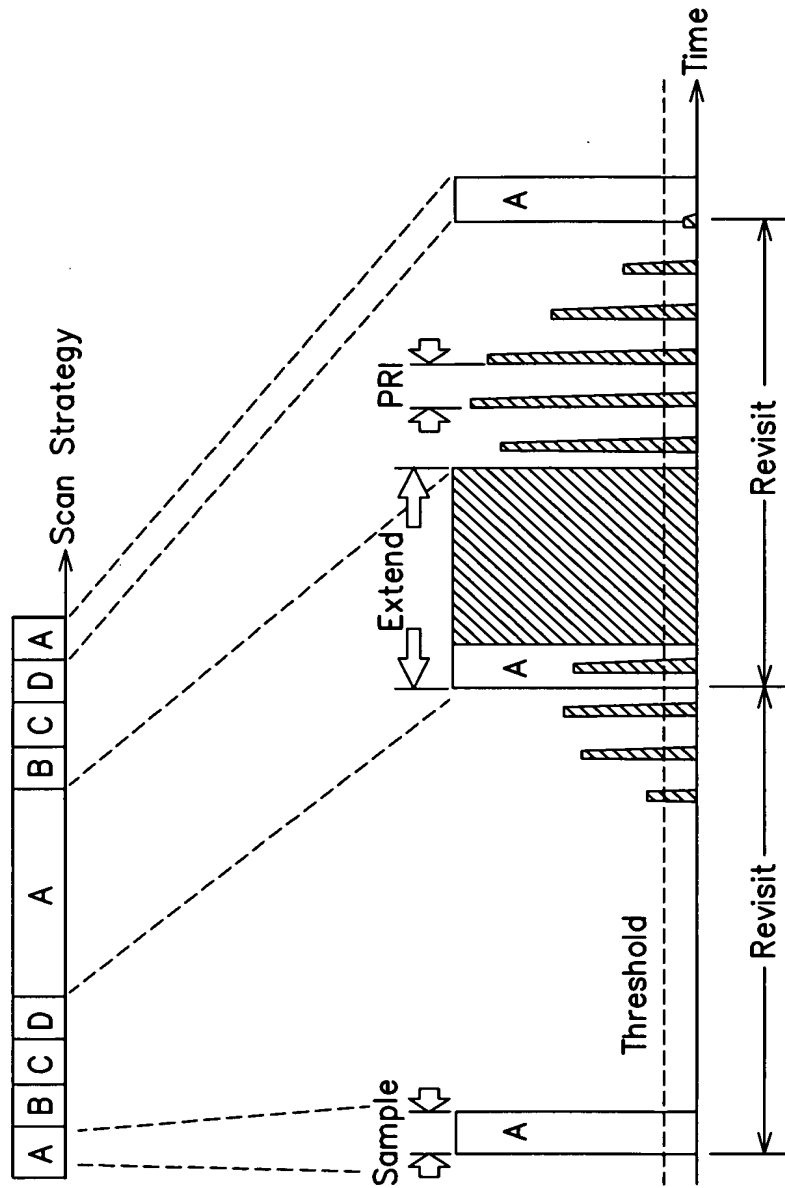


FIG. 7

NO PULSE GROUPING LOGIC:

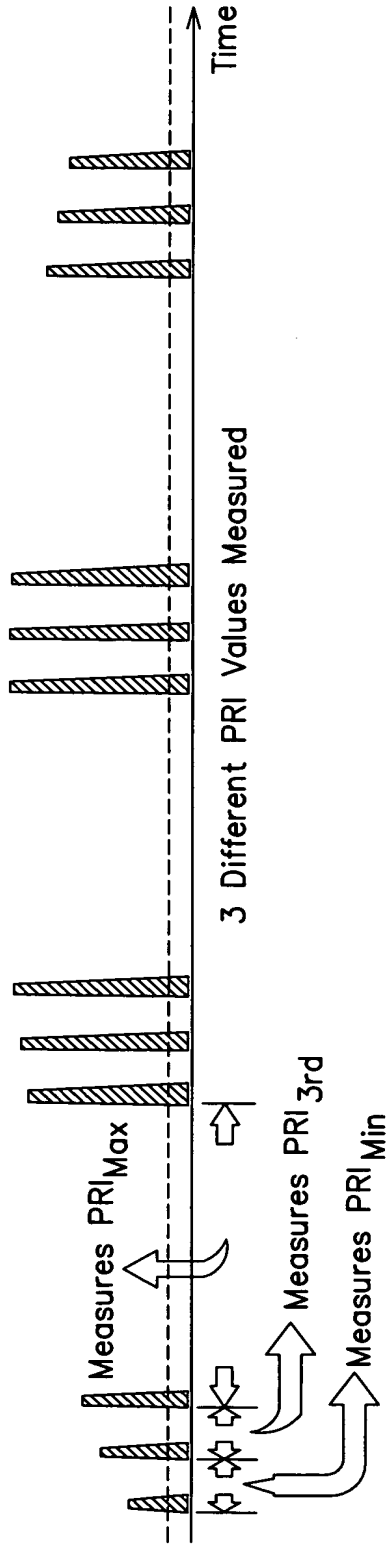


FIG. 8A

WITH PULSE GROUPING LOGIC:

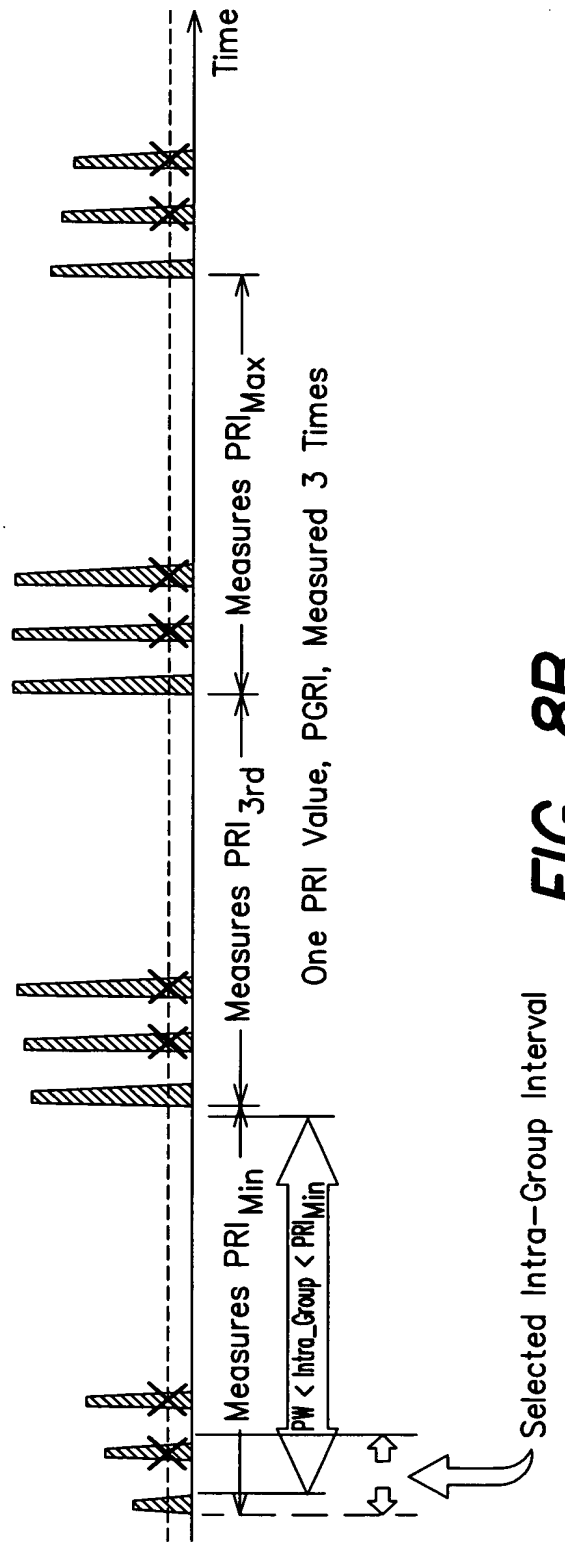


FIG. 8B



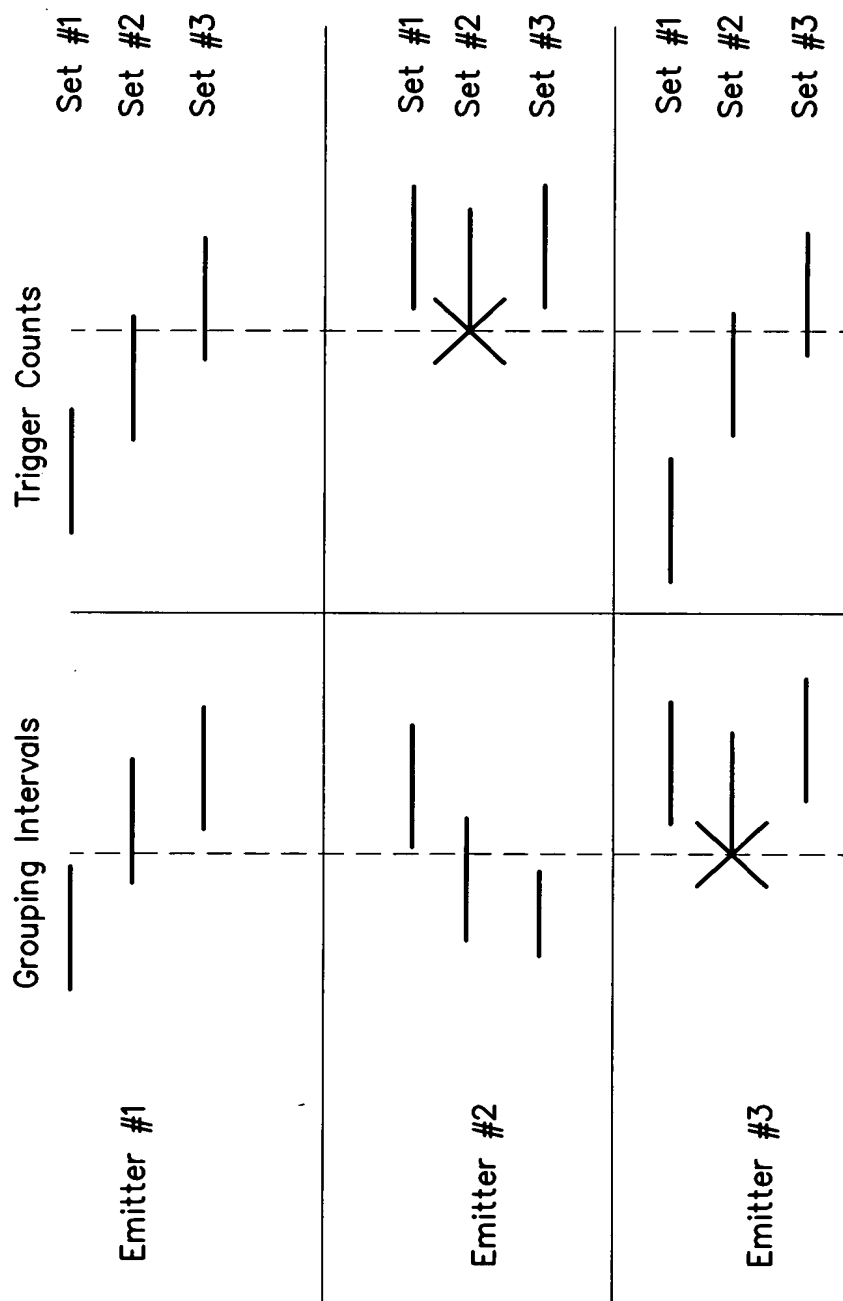
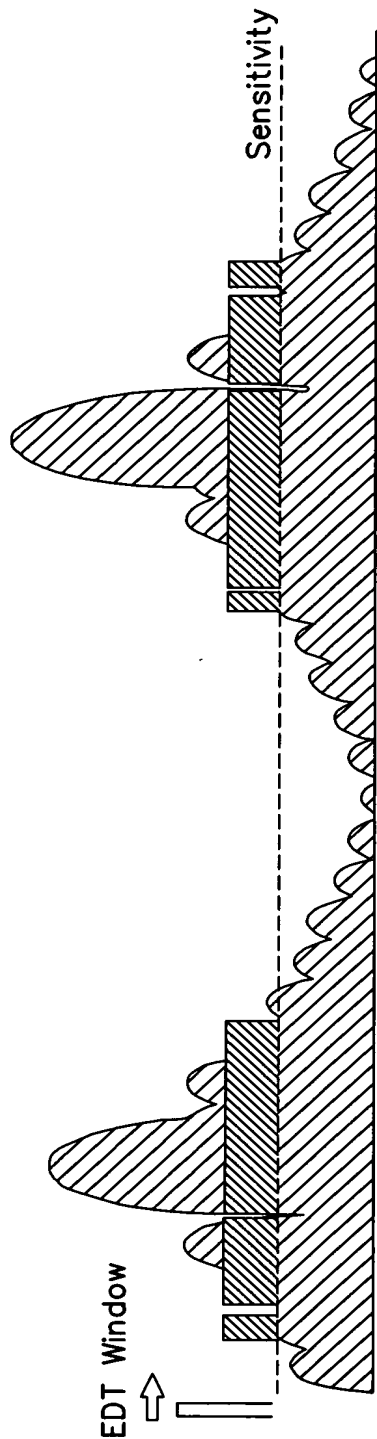
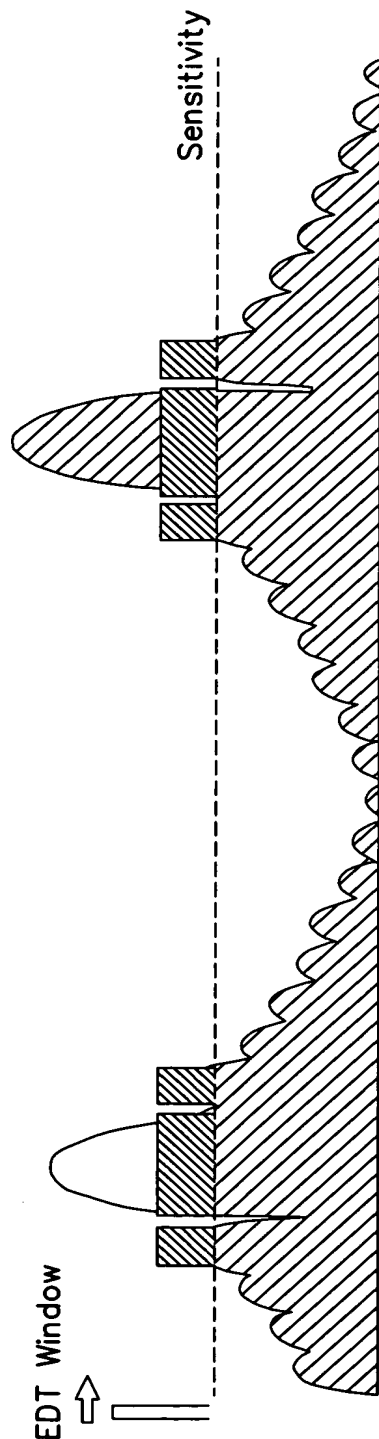


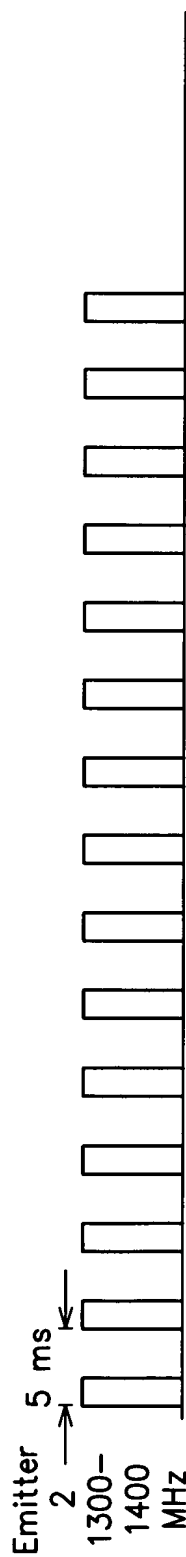
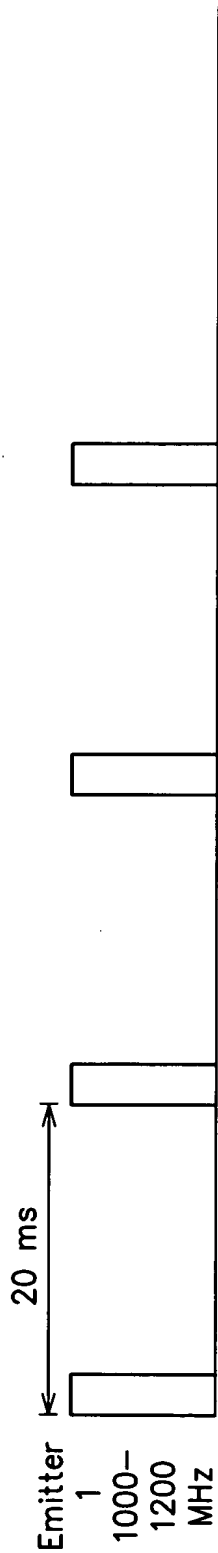
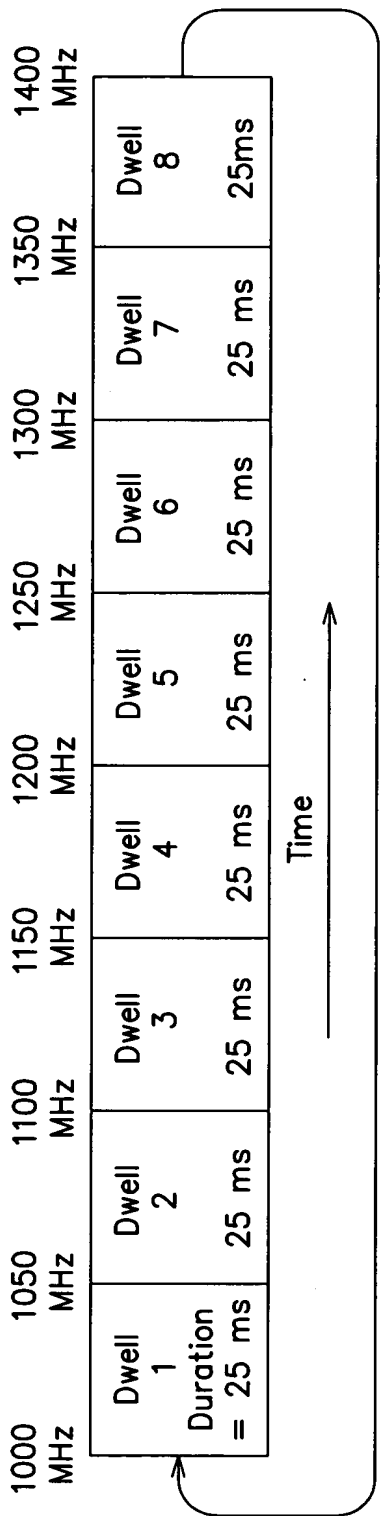
FIG. 9



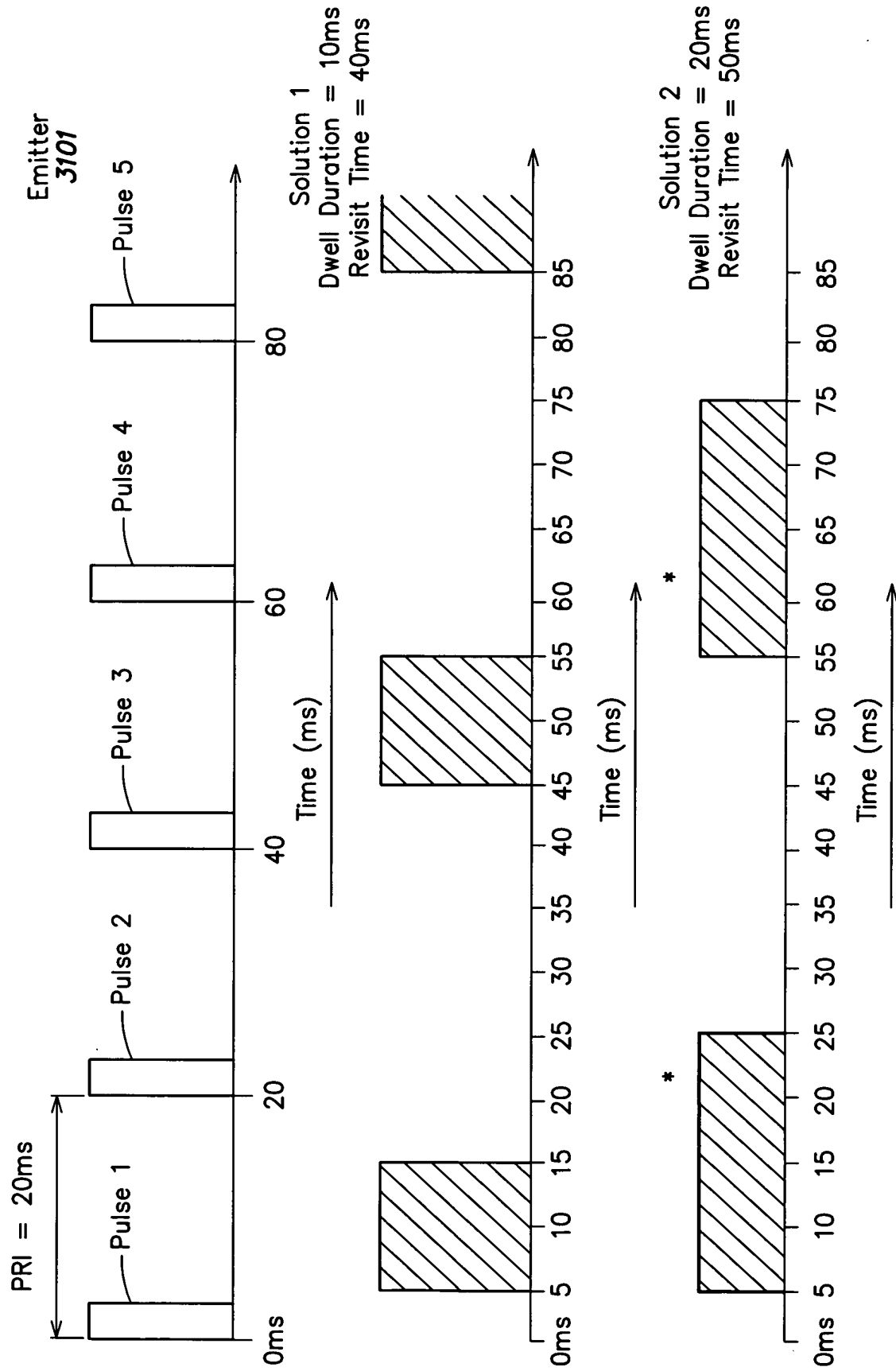
**FIG. 10A**



**FIG. 10B**



**FIG. 11**



**FIG. 12**

4000

Emitter Name	Detecting Method 1 250MHz IF/ 15MHz VBW RVT	Detecting Method 2 30MHz IF/ 15MHz VBW RVT	RF Min (MHz)	RF Max (MHz)	Min MDT (ms)
E1	100 ms	650 ms	1000	1300	3
E2	120 ms	780 ms	1220	1350	5
E3	110 ms	330 ms	1510	1810	2
E4	130 ms	390 ms	1730	1860	4

FIG. 13

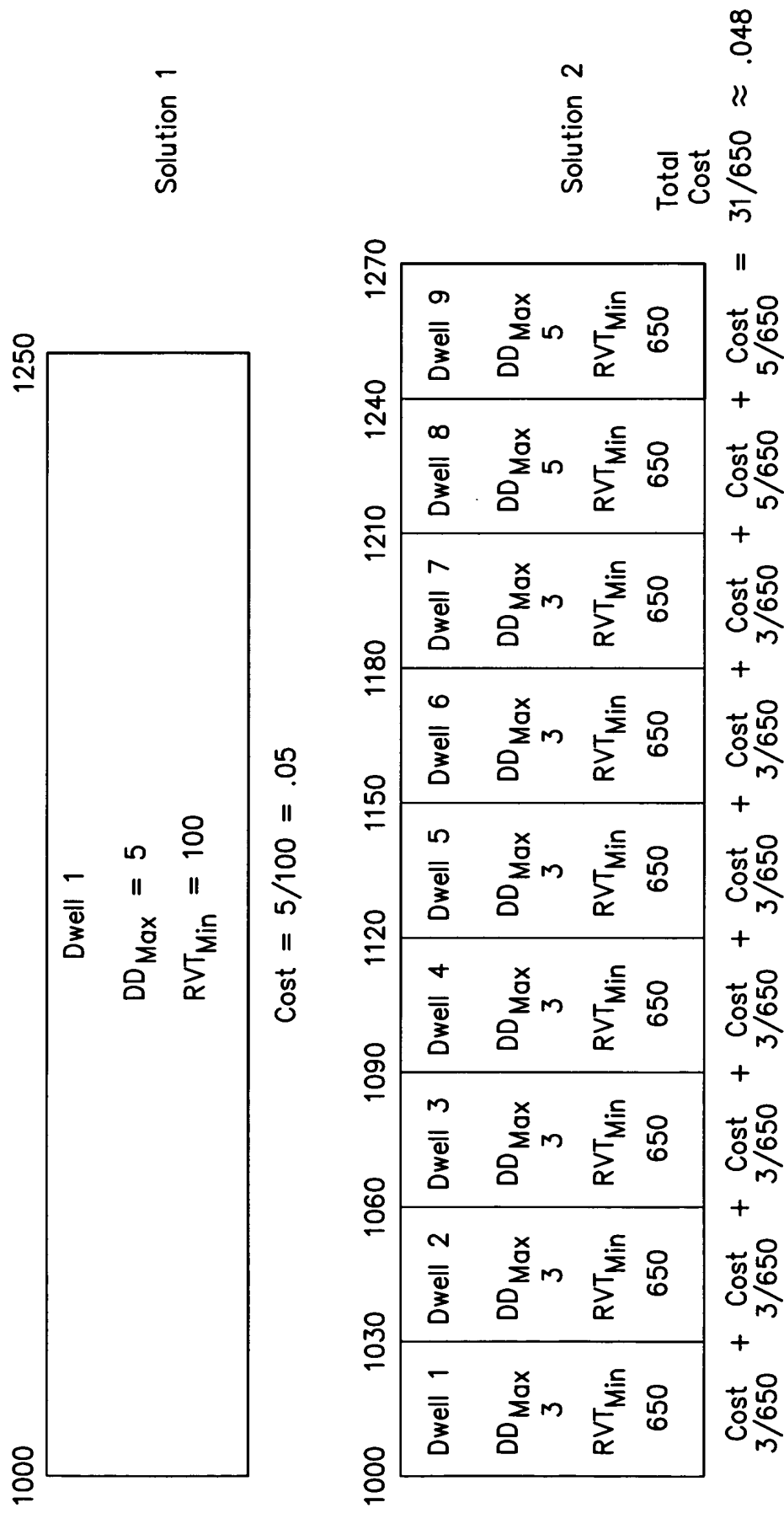


FIG. 14A

1510

1760

Dwell 1

DD<sub>Max</sub> = 4 ms

RVT<sub>Min</sub> = 330 ms

Solution 1

Cost = 4/330 = .012

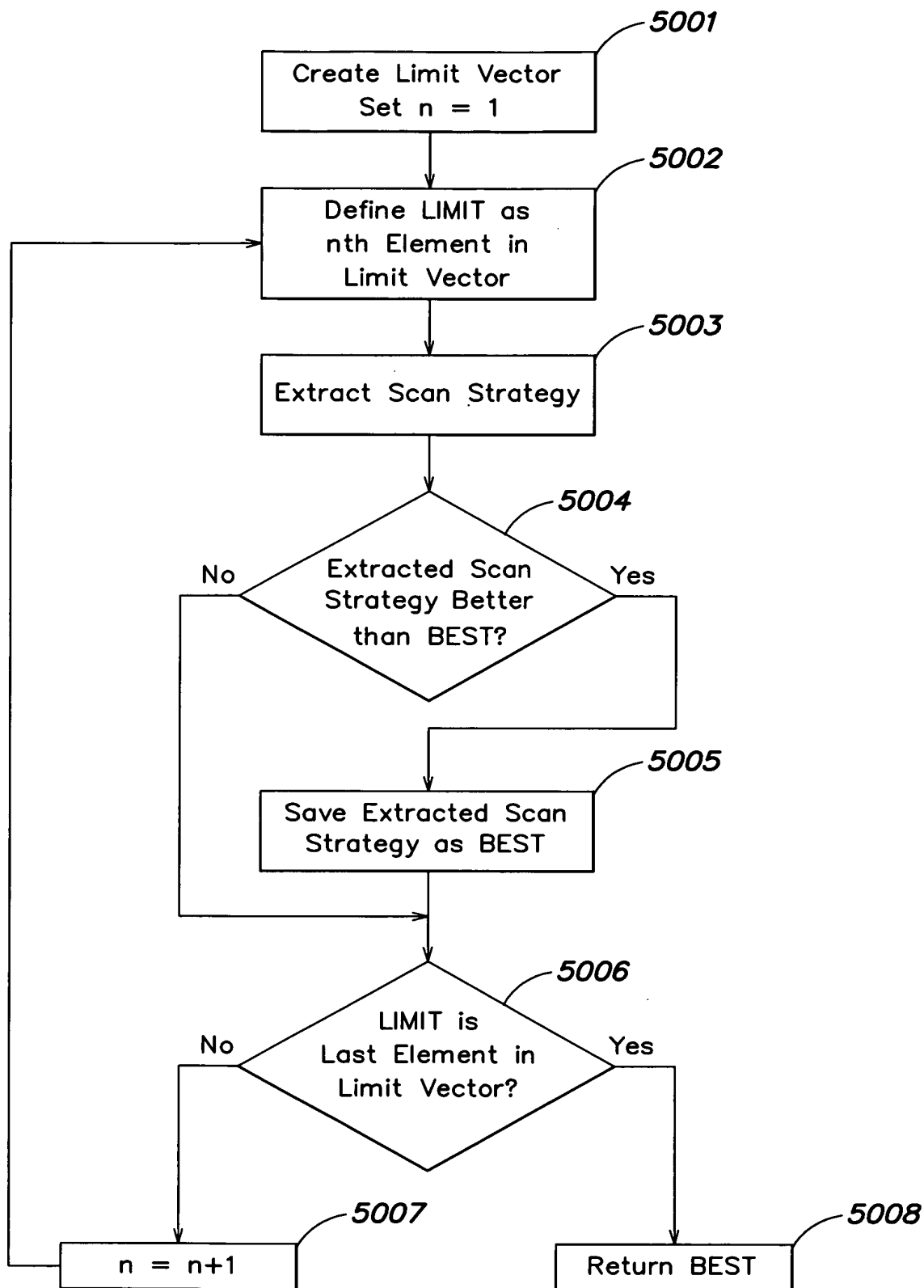
1510      1540      1570      1600      1630      1660      1690      1720      1750      1780

Dwell 1	Dwell 2	Dwell 3	Dwell 4	Dwell 5	Dwell 6	Dwell 7	Dwell 8	Dwell 9
DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 2	DD <sub>Max</sub> 4	DD <sub>Max</sub> 4
RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms	RVT <sub>Min</sub> 330 ms

Solution 2

Cost + Cost + Cost + Cost + Cost + Cost + Cost + Cost + Cost = 22/330 = .06  
2/330 2/330 2/330 2/330 2/330 2/330 2/330 4/330 4/330

FIG. 14B



**FIG. 15**



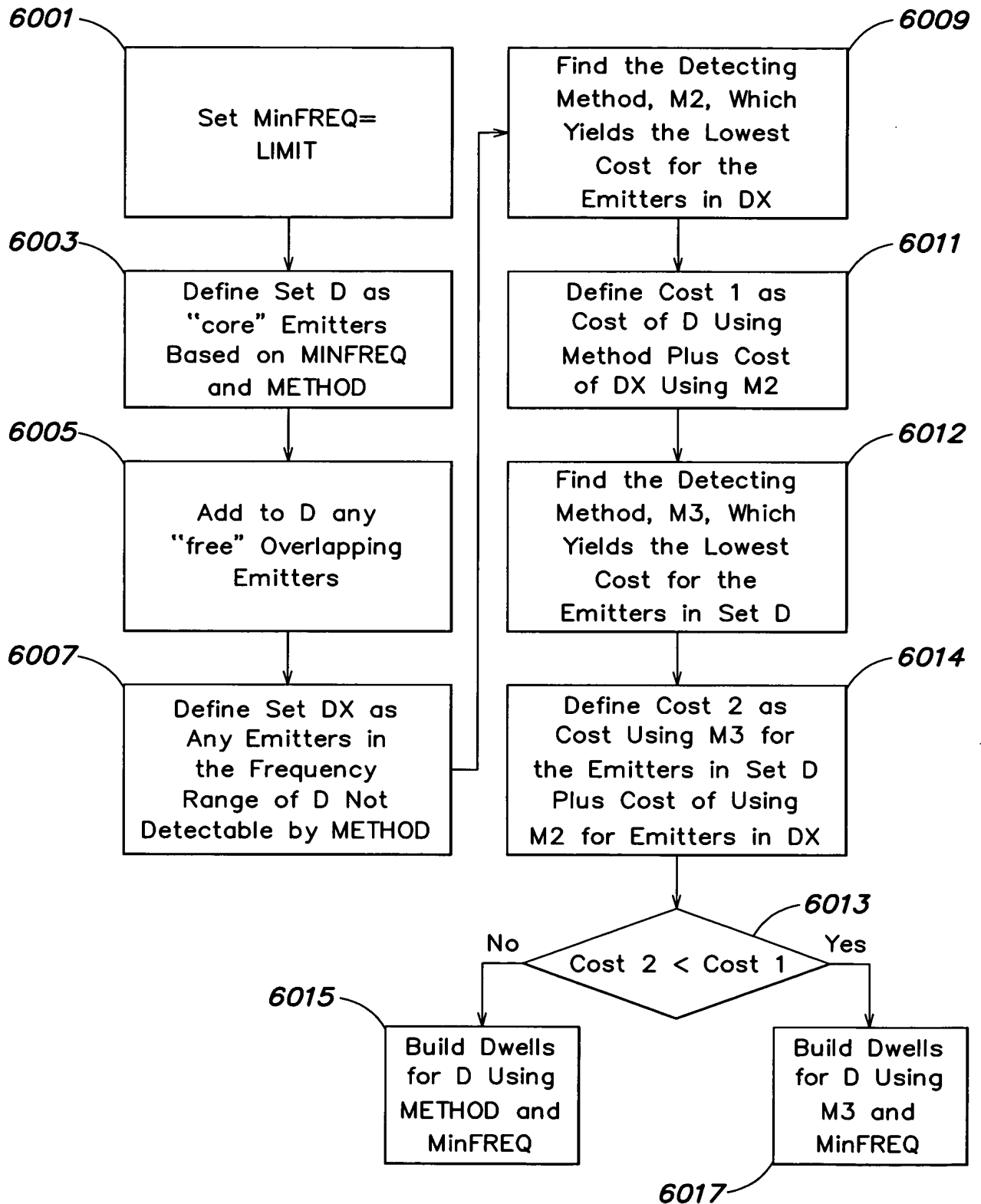
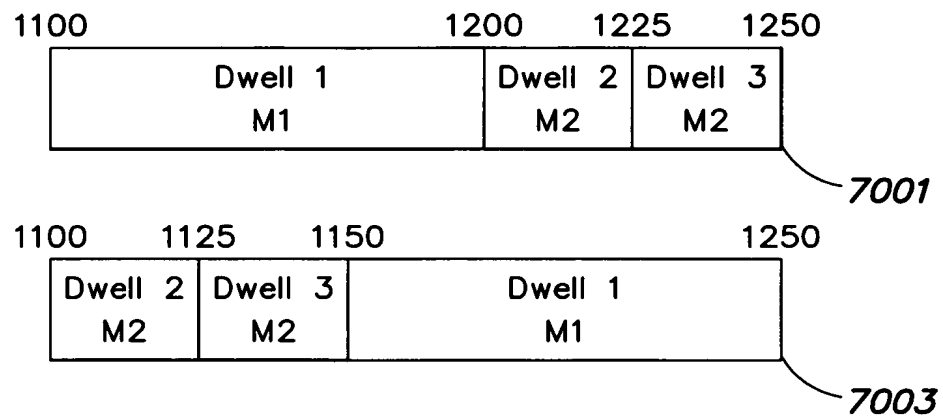


FIG. 16

Name	RF Min	RF Max
E1	1100	1200
E2	1150	1250



**FIG. 17**

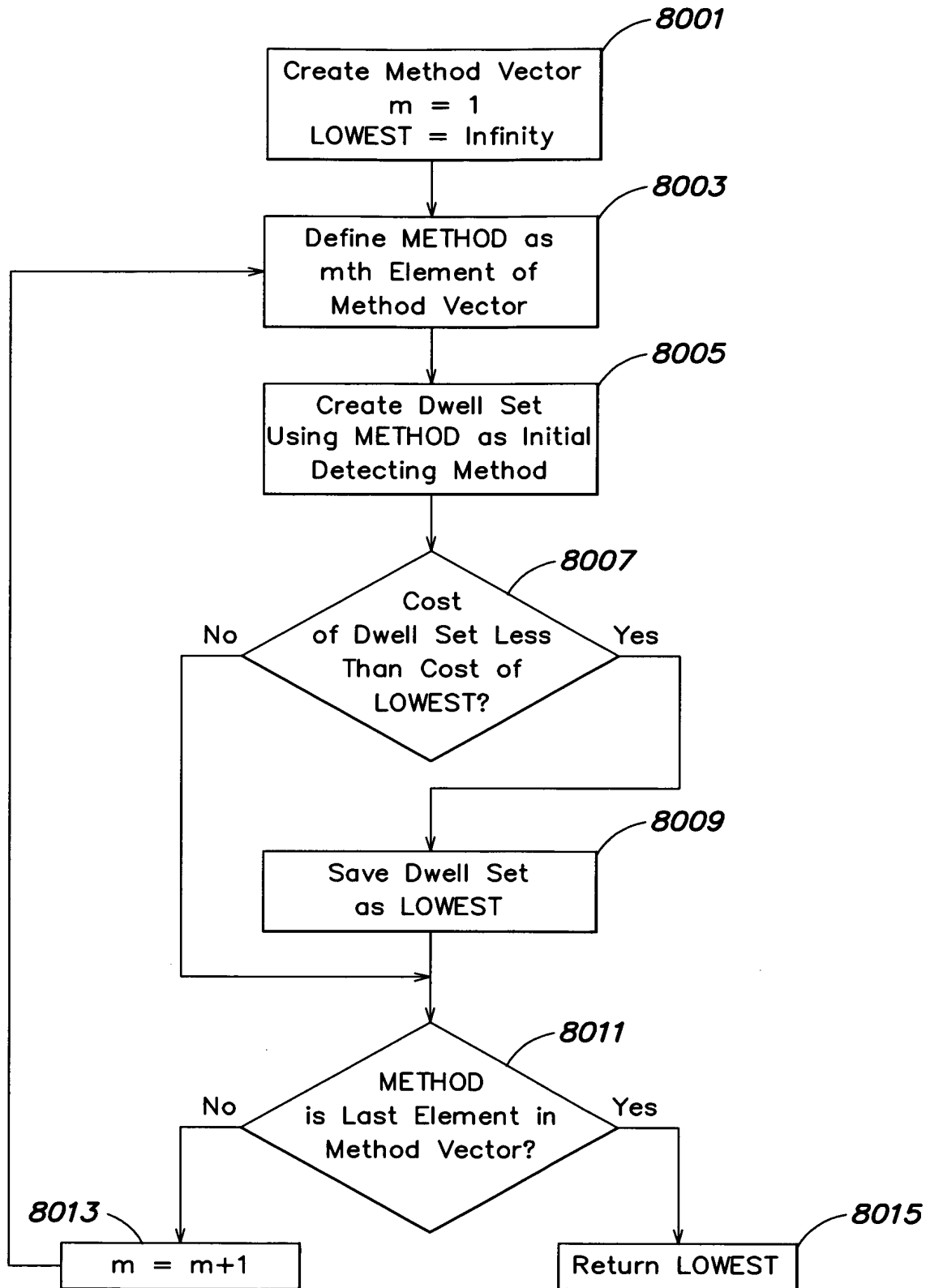


FIG. 18

Emitter	Dwell Duration (ms)	Revisit Time (ms)
Emitter 1	1	500
Emitter 2	2	1200

***FIG. 19***

Emitter	Dwell Duration (ms)	Revisit Time (ms)	Cost
Emitter 1	1	500	.002
Emitter 2	5	1000	.005

***FIG. 20***

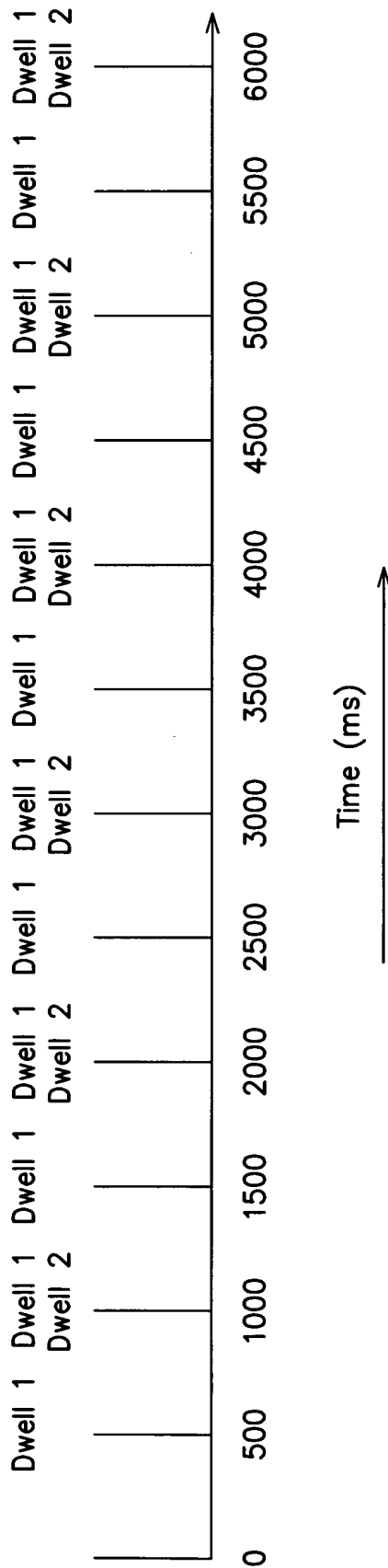
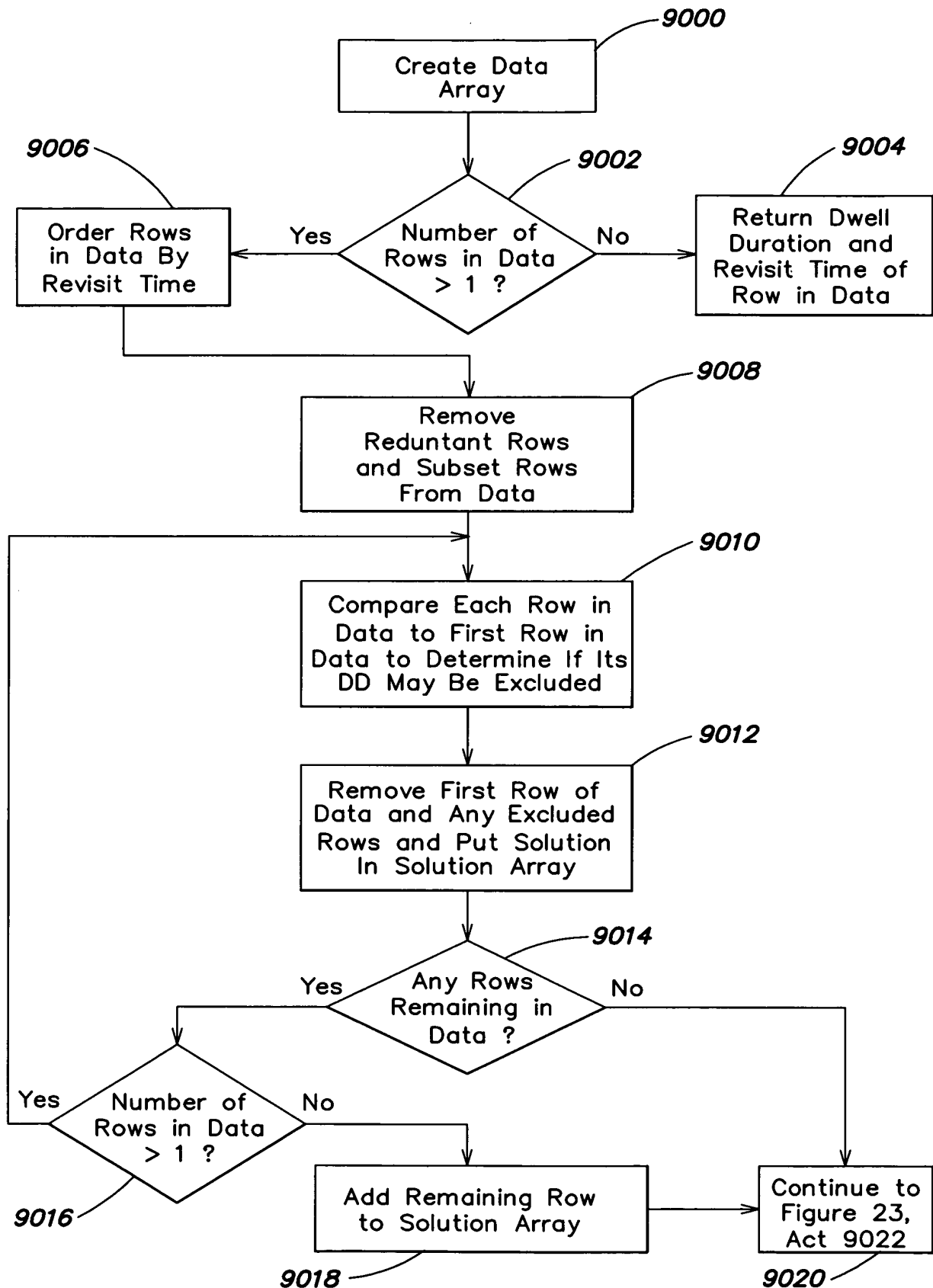
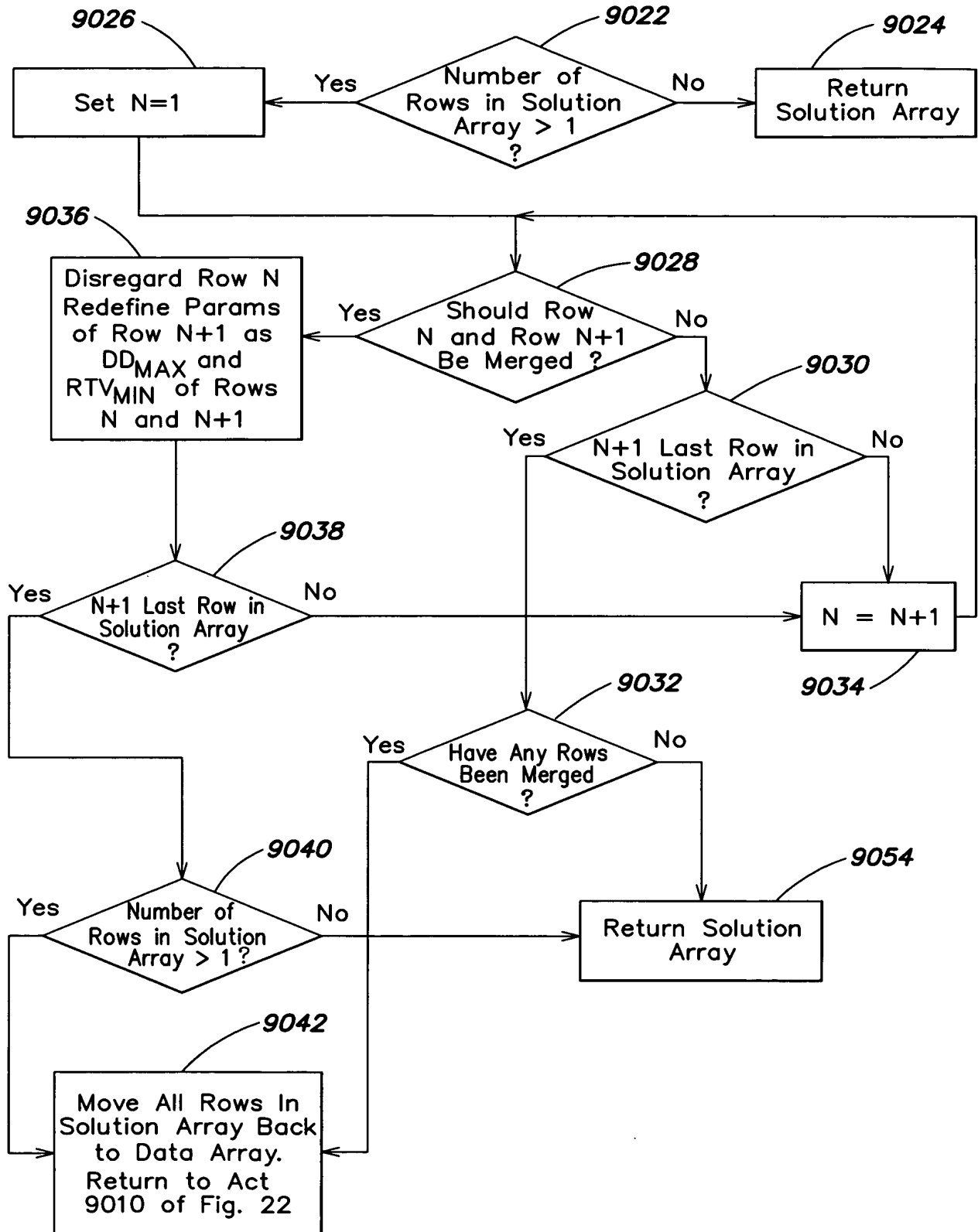


FIG. 21



**FIG. 22**



**FIG. 23**

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
3	19	2000
3.05	17	2868

9051

9052

FIG. 24C

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000
3	19	2000
3	19	2000
3.05	17	2868

9048

9049

9050

FIG. 24B

9044

Data		
MDT	EDT	RVT
3.05	17	2868
3	19	2000
3	19	2000
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000

FIG. 24A



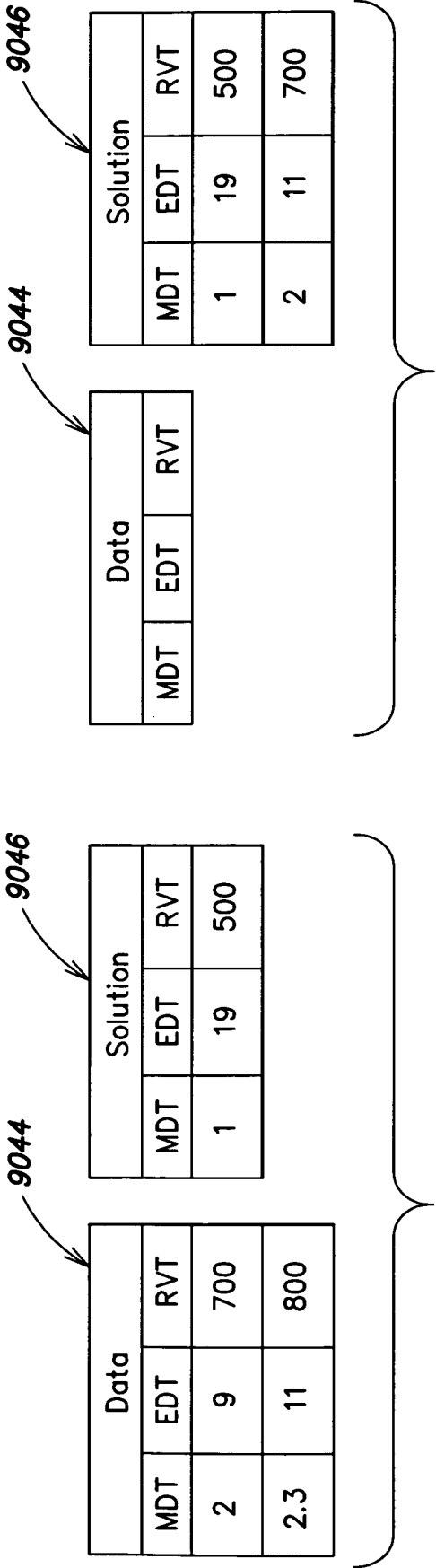


FIG. 24D

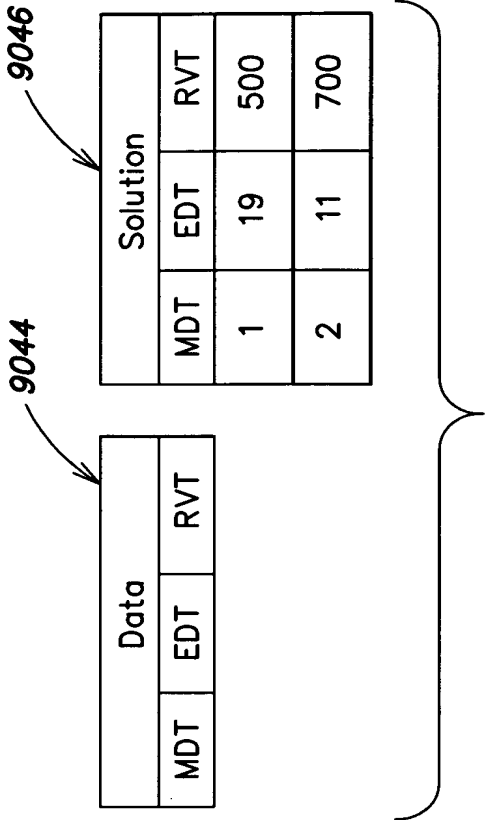
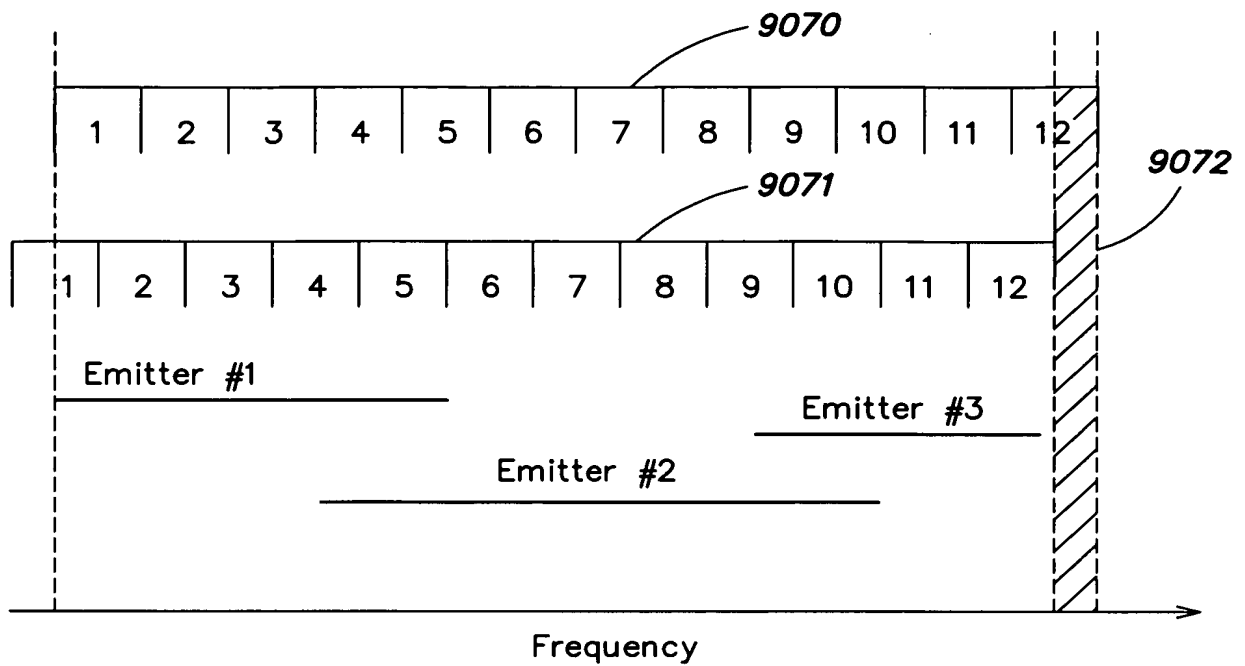


FIG. 24E

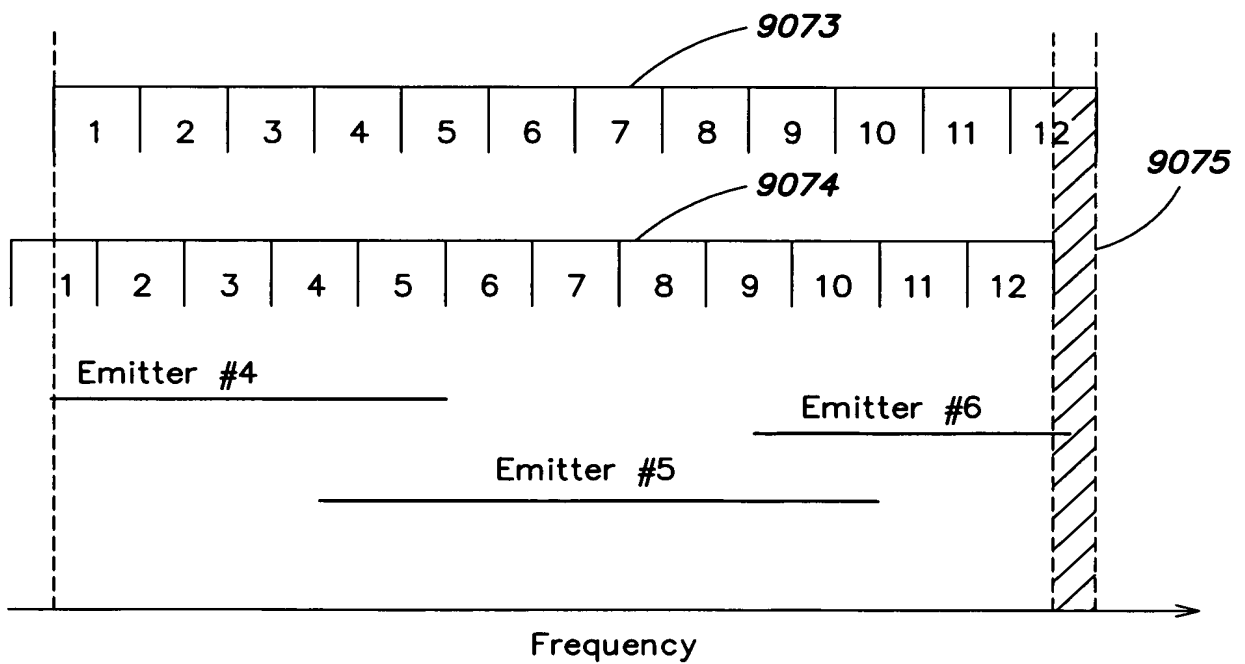
Table illustrating a process flow for FIG. 24F. It consists of a single 'Solution' table (labeled 9046) with two rows and three columns: MDT, EDT, and RVT.

Solution		
MDT	EDT	RVT
1	19	500
2	11	700

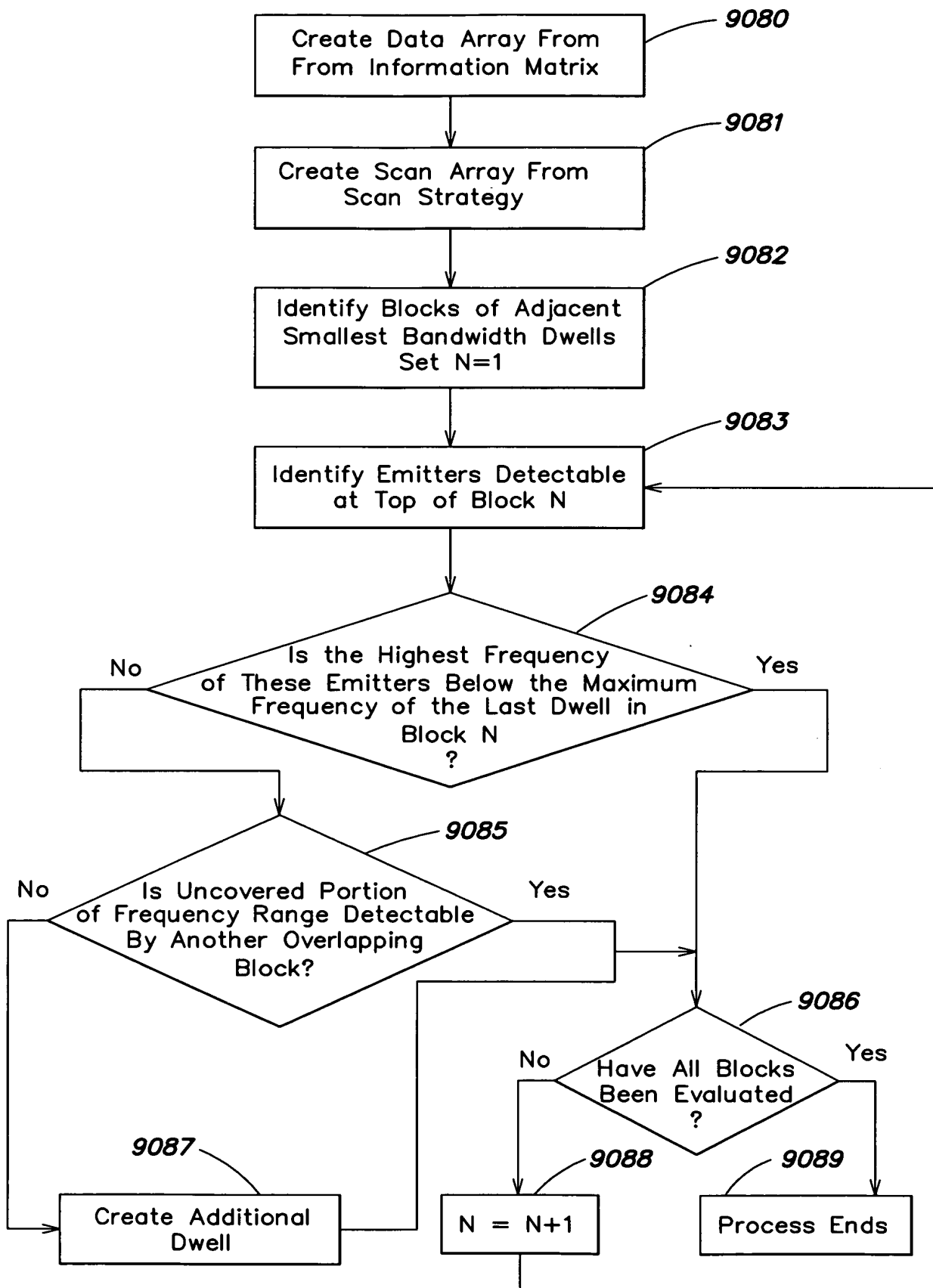
FIG. 24F



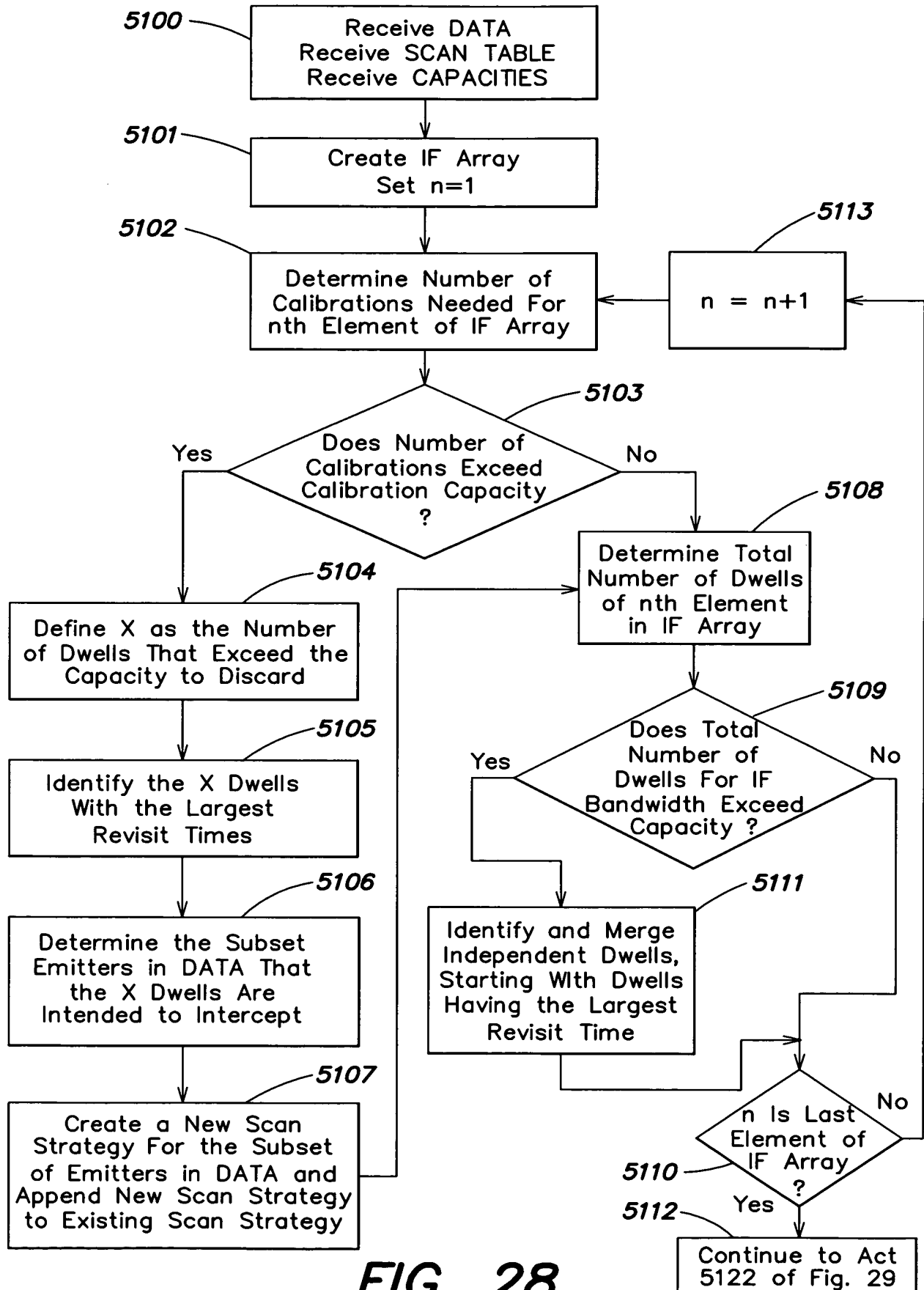
**FIG. 25**

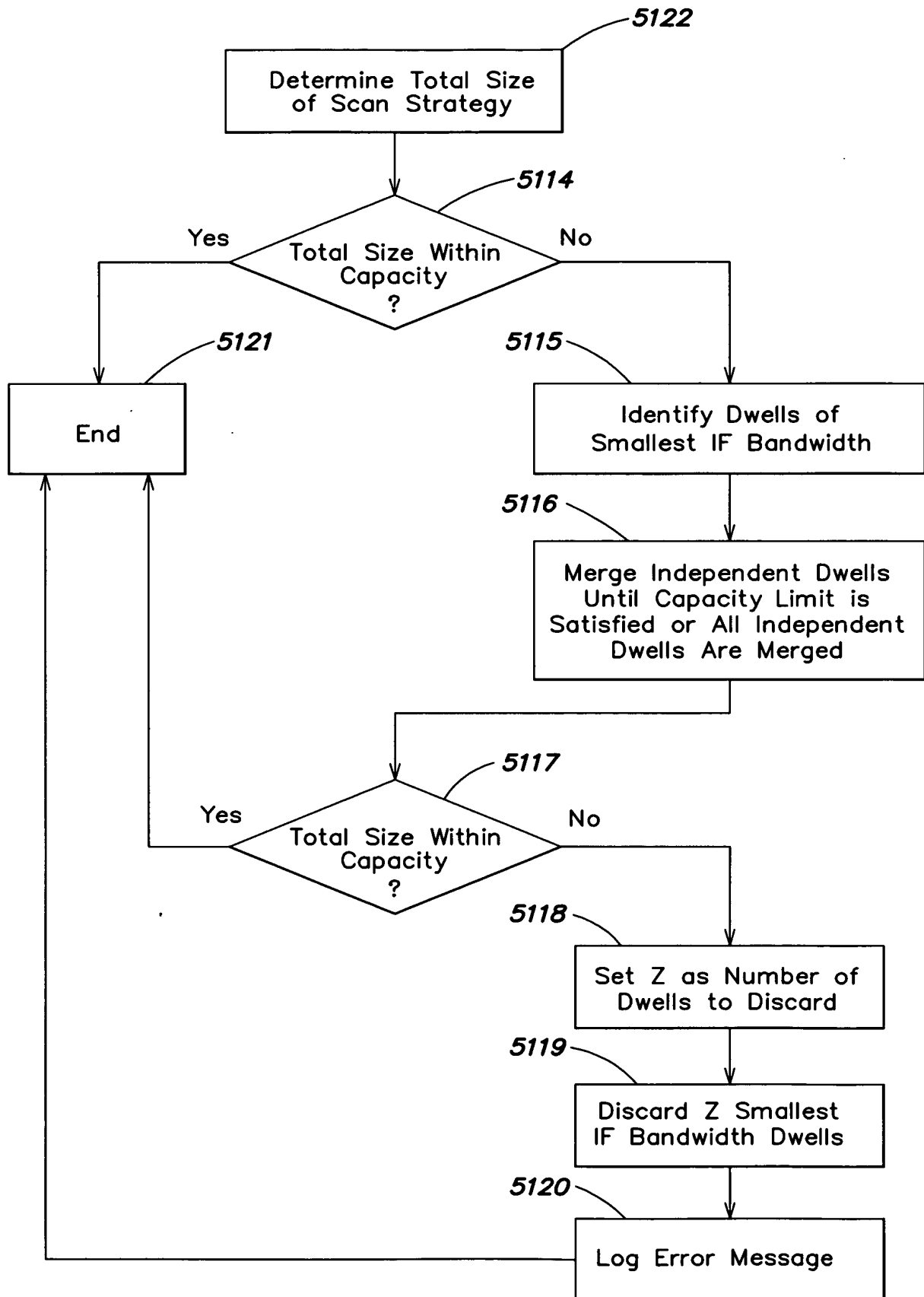


**FIG. 26**

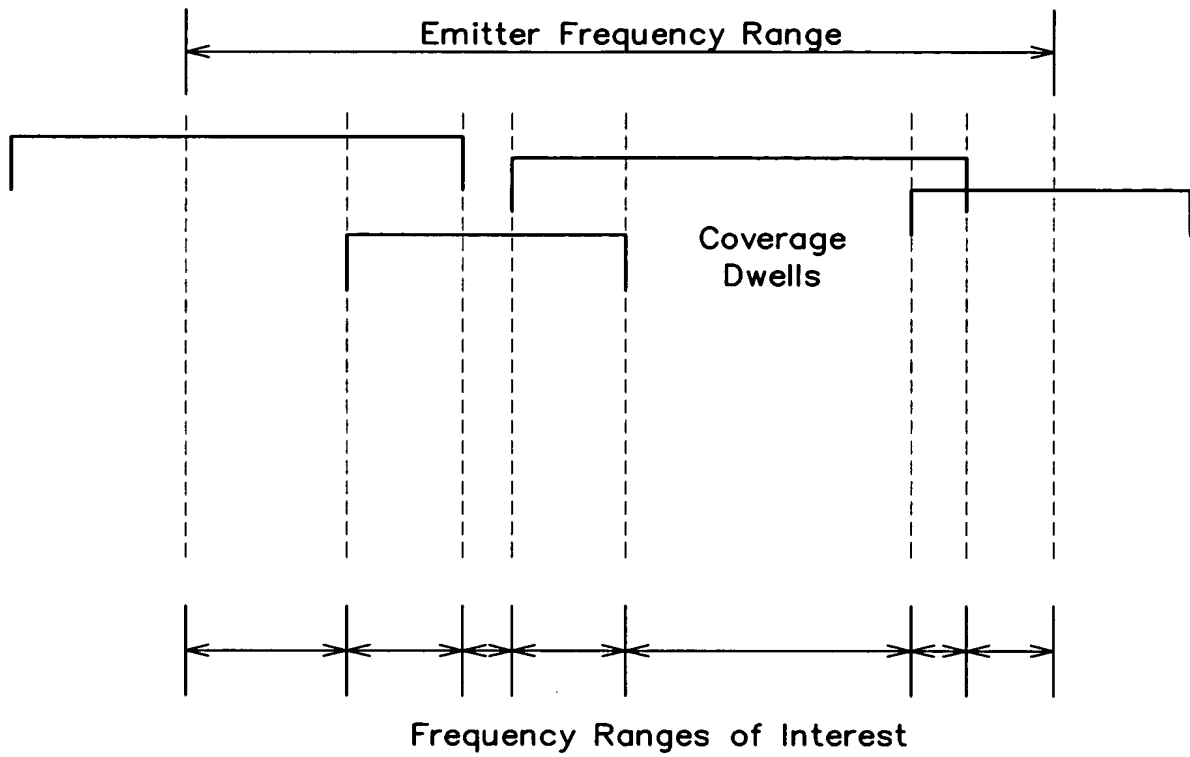


**FIG. 27**





**FIG. 29**



**FIG. 30**

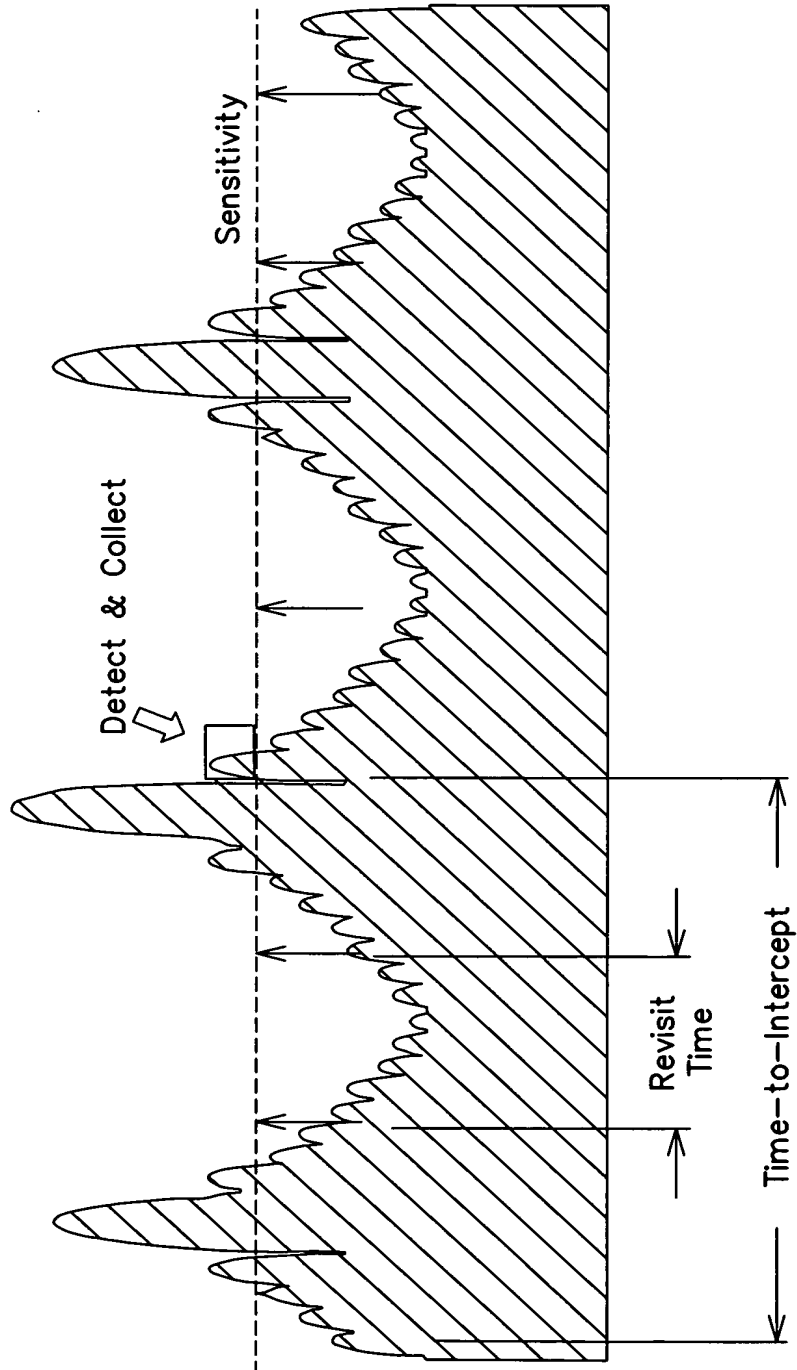
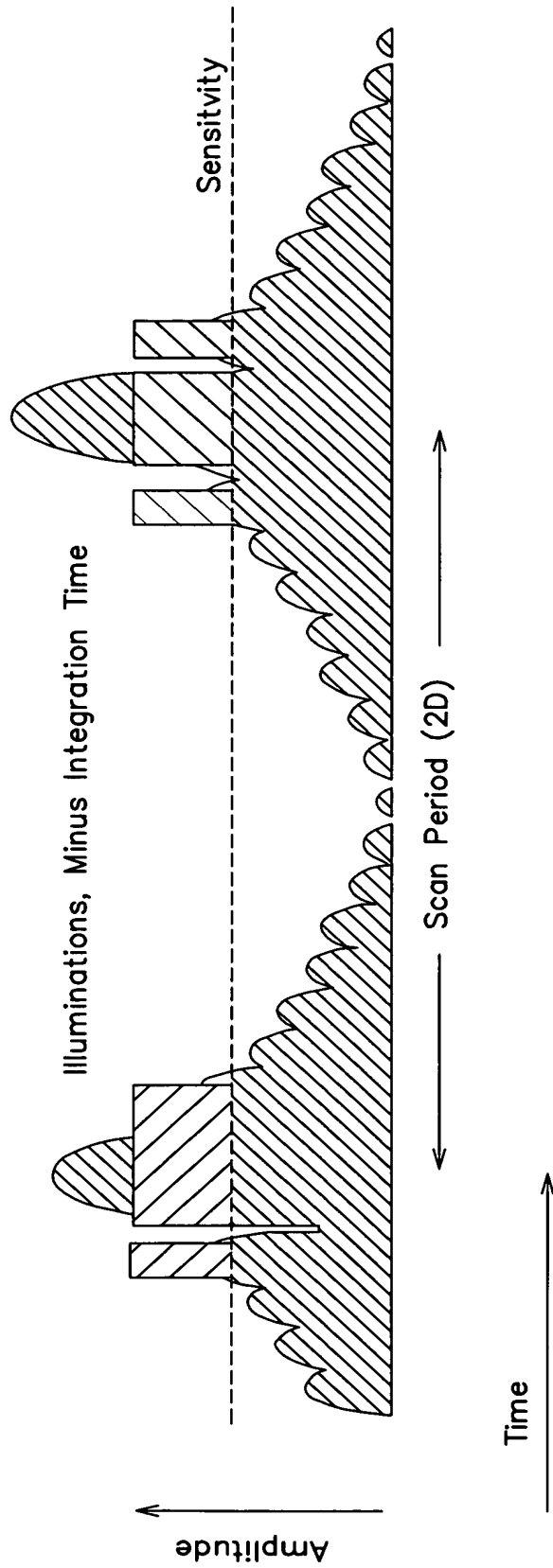


FIG. 31



**FIG. 32**